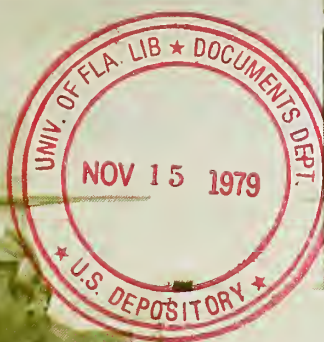


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29/11



# Combat Crew

strategic air command

★★★★

NOVEMBER 1979





Maj Gen Earl G. Peck  
HQ SAC Chief of Staff

# PEOPLE

## *Maintaining National Security*

**T**he strategic balance between our country and the USSR is of deep concern to all of us. Discussions of this subject usually focus on such things as hardware requirements . . . procurement of systems modifications . . . development of new weapons systems . . . and so on. The availability of appropriate hardware *is* a critical factor in the total equation for national security. However, even more critical in the same equation are the dedicated, intelligent, motivated people who are prepared to employ the hardware. National security requires round-the-clock vigilance and dedication. To this end, we must maintain a well prepared "people *and* weapons" force. We often use the phrase: "People are our most important military resource." If this sounds trite, it is nonetheless true. A nation with the capability and resolve to defend itself and its vital national interests is far more likely to avoid armed conflict than is a nation unable *or* unwilling. A potential enemy contemplating aggression must know that the United States can *and* will respond so devastatingly that any reasonable planner is deterred.

For most of us, this philosophy is accepted without question, and we feel a sense of commitment; but for others there is doubt or uncertainty. The need for an effective military organization in peacetime is difficult for many to comprehend.

In peacetime some people separate from the Air Force in pursuit of increased income. Unfortunately, some separate because of a lack of motivation to

sustain that extra effort required to meet demanding standards. After all, in today's society of convenient living, with its eight to five ethic and creature-comfort ideal, sustaining motivation is tough when junior officers see their seniors, after 20 years or more of service, work 12 hours a day, six or seven days a week. But that's what it takes . . . an individual who shuns private gain and personal comfort for the greater calling of protecting the security and well-being of his country. It is unfortunate that some people believe the personal freedoms we enjoy in this country are a birthright of citizenship. Freedom is *not* free.

Protecting our nation is a 24 hour-a-day task and, unlike most civilian jobs, the benefits are not always tangible and sacrifices are a way of life. Each of you considered your role in maintaining the security of our country when you decided to remain on active duty. For those who have decided to remain with the Air Force, will your role be active or passive? If active, your awareness of the potential threat to our country's security is essential. This text is addressed to those who want an active role, because for you the challenge is real.

We discuss the "threat" to the point that it may seem redundant, and it sometimes gets softened in the political environment; however, to preclude complacency, it is worth discussing.

Since the 1960s, the Soviet Union has embarked on the greatest buildup of strategic and tactical offensive forces in recorded history. The Soviet's massive military machine now far exceeds reasonable

# Combat Crew

Magazine of the Strategic Air Command - 30th Year of Publication

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defensive requirements and shows no signs of slowing in growth. Despite these facts, our forces currently remain capable of delivering a devastating blow to an adversary, if necessary. But the key elements in maintaining that capability are modern weapons and people . . . dedicated people . . . the type of people who realize all is not perfect — in fact, far from it . . . and who realize there will be disappointments along the way . . . those who believe in protecting a way of life and derive satisfaction therefrom . . . those who are willing to make the necessary sacrifices. As Secretary of Defense Harold Brown so aptly stated:

"People are the greatest asset we have in defense . . . the Soviets may be able to close the gap in weapons production and to narrow the gap in military technology, but they will never come close to the spirit, the dedication, and the initiative of the men and women in the Armed Forces of the United States."

SAC has been the cutting edge of U.S. defense, and its people have always been prepared to do whatever was necessary to meet the challenges. I am confident that today we have the people to accept the challenge . . . to serve their country, to preserve freedom, and to sustain our way of life. It must always be so.



## ON OUR COVER

**SAC's munitions loading crews, bomber crew chiefs and security police in competition during Giant Sword 79. For more see page 4.**

**SACRP 127-1 VOL. XXIX NO. 11 November 1979**

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# *The Thrill of* **VICTORY**



**Maj Stephen J. Miller**  
Editor

## **Minot wins top spot in close competition**

**S**AC's Loading Competition was a close contest all the way, but Minot won the coveted Barrentine Trophy with a final score of 2790. The competition held at Ellsworth AFB, Sept 11-18, saw teams from 20 SAC units working hard to win.

Actually, the meet was off to a fast start immediately after opening ceremonies Tuesday, Sept 11. Maj Gen Earl G. Peck, Chief of Staff, SAC, officially opened the annual competition between SAC munitions loading teams, bomber crew chiefs and security police personnel. He pointed out that not everyone could be a trophy winner at the meet, but through an exchange of ideas and observing others at the meet all competitors would come away winners.



Photos by Ellsworth Audio Visual Service

CMSgt Jim McCoy, newly appointed Chief Master Sergeant of the Air Force, also addressed the competitors. He set the pace for competition enthusiasm when he asked: "Will the team that is going to win please stand up." All competitors in the theater came to their feet in one motion with a roar of "We will." A call that rocked the theater and brought smiles to all observers.

At the end of the first round of competition Minot emerged as the leader in the race for the Barrentine trophy. Minot's crew chief, munitions team and security police team had earned 1338 points out of a possible 1400 to take the lead. Ellsworth AFB teams were in second place with a 1283 point total.

The first round included several "perfect" scores. Garnering perfect scores of 50 points for MMS equipment inspection were the 7th, 28th, 42d, 93d, and 320th MMS teams. There were two perfect weapon loads accomplished in the first round. The 7 BMW MMS team from Carswell and the 509 BMW team from Pease AFB had both earned a perfect 550 points for their loads. Minot's crew chief, Sgt Neil E. Flavell, led all crew chiefs with a 95 on his post-load exercise.

The security police team from Mather AFB led in the security police competition at the half way point. This team included: SSgt David W. Turner, Sgt Floyd C. Jennings, SrA Billy G. Legg, AIC's John A. Cochlin and John W. Grant, and Amn Shane M. Simons.



## Finding the Best of the Best

The weapon loading exercise begins as the aircraft crew chief performs either a preload or post-load exercise on the bomber. Crew chiefs were given a time limit of 28.5 minutes to perform demanding tasks including power cart operations, power OFF and power ON preflights, cartridge loading, LOX loading and engine oil sampling. The crew chief had to really "hump" to accomplish all of the required tasks under the time limit. Several didn't make it and the penalty was one point for each 15 seconds over the time limit.

Although speed of operation was evident, safety played an important role in the exercises. A safety/reliability violation anywhere would cost the aircraft crew chief 20 points, the team chief 125 points, or a team member 50 points. A violation included such things as running near an aircraft, failure to chock vehicle wheels, missing tools after job completion, failure to set equipment brakes, etc.

At the completion of the crew chief exercise the MMS loading team was allowed 15 minutes for weapons loading preparation. Once this was accomplished, the team chief would thoroughly brief his team on required safety items and the task to be performed. At his call, "break" a highly precision team would move into action.

Team work is essential if the weapons are to be loaded properly within the prescribed time limits. Many hours of practice went into honing each MMS team into a truly competitive team. This hard work was evident throughout the entire competition as the best from each unit went against each other to determine the best of the best.

The security police exercises were equally chal-

lenging. The scenarios were protected throughout the competition to prevent any team from gaining an unfair advantage on another by seeing what was to happen. The scenario portrayed a real life situation in which the "enemy" was to attempt to gain control of or destroy an aircraft. The tension was high as the sentry knew the enemy had attacked the base, but was still unseen. Then, suddenly, a close boundary guard would see the enemy attempting to penetrate a secure area. His next actions were to sound the alarm and with the aid of the other team members deny penetration of the area.

The scenario also involved a "friendly" placing the sentry into a shoot, no-shoot situation. The entire security police team was required to handle the situation, control and protect the area from penetration without outside help, and return the area to the required secure state. In addition to the exercises, the security police teams were also required to complete a rigorous weapons firing course at the base range.

All Giant Sword team members were required to complete examinations. These were designed to cover job knowledge in the competitors specific area of expertise.

No competition would be complete without some forum for handling evaluation complaints. This year the arbitration committee consisted of one officer (Col Richard G. Grammer, SAC Director of Munitions.) and nine master through chief master sergeants from Hq SAC and NAF's. There were plenty of arbitration requests to be handled and this board spent many hours in session.

Evaluators for the weapon loading and crew chief

exercises were representatives from Hq SAC Maintenance Standardization and Evaluation Team. The security police judges included representatives from Hq SAC and the NAFs.

## Round Two

During the second and final round of competition the 7 BMW MMS team earned another perfect score. This boosted the Carswell team of TSgt Paul W. Grosskurth, SSgts Douglass A. Sloan and Travis Barnard, and SrAs Peter A. Heisler, Maxie H. Thompson and Michael B. Smith into the lead for the best munitions load trophy. Also earning a perfect loading score was the Plattsburgh MMS team.

With the 320 SPS exercise and the 93 BMW's weapon load complete the competition came to a close. Everything was close and each competitor's attention was focussed on the large score board that evening as the final test scores for the bomber crew chiefs and munitions load crews and the marksmanship scores for the security police teams were posted.

## The Winners

The Pease munitions load crew had the highest test score, a 93; Loring's crew chief, SSgt Cleve L. Craney posted a perfect 100 on his postload exercise; and the best marksmanship score (227 of 240) went to the Ellsworth team. But with all the scores



now on the board the thrill of victory belonged to the 5th BMW, Minot AFB. The Minot team included: MMS — Sgts Michael D. Schiefer, and Neil E. Flavell (Crew chief), SrAs Kevin J. Fosburgh and Alan R. Foltz, A1Cs Edward G. Pouch and John P. Reymond.

SPS — TSgt Harry E. Weaver, SSgts David L. Ingold and Melvin J. Lankford, SrAs Joseph F. Stambaugh and Charles L. Adams, and A1C John E. Browne, Jr.

In winning the Chief Master Sergeant Wilbur R. Barrentine Trophy the teams from Minot AFB amassed 2790 points out of a possible 3000. This truly reflected a total team effort. The teams from Pease AFB placed second while Ellsworth AFB, the host base was third. The Best Bomber crew chief was SSgt Thomas A. Stastny, 92 BMW and the Best Security Police team was from the 97 BMW, Blytheville AFB.

## Finale

General Richard H. Ellis, Commander in Chief, SAC, was on hand at the closing ceremony to present Minot with the Barrentine Trophy. In his remarks he stated, "the competition here at Ellsworth has been tough and demanding. We made it that way intentionally, and each of you can be proud of your performance here. For those who will be taking home the silver, there can be no doubt that you are, indeed, the very best: In the Strategic Air Command . . . in the United States Air Force . . . and in the world."

Continued on Page 15



# BIG INSTRUMENT

## SHORT BURSTS

Capt Tome H. Walters, Jr.  
1CEVG Instrument Division  
Barksdale AFB, Louisiana

### AROUND THE PATTERN

**Traffic pattern** — the end of one approach up to the beginning of the next one. (Pardon the home-made definition.) Unfortunately, the traffic pattern has turned into the penalty box for some folks, lately. Some did it to themselves. Others were done unto. Read on, and we'll explain.

**Tune and Identify** — What did your pilot training IP tell you was *always* the *first* step in flying an instrument approach? Tune and identify, right? Easy enough for that first descent and approach. Both bomber and tanker descent checklists have a line item for nav aids to jog your memory. But roll out on downwind with us for a minute and pick up the sequence.

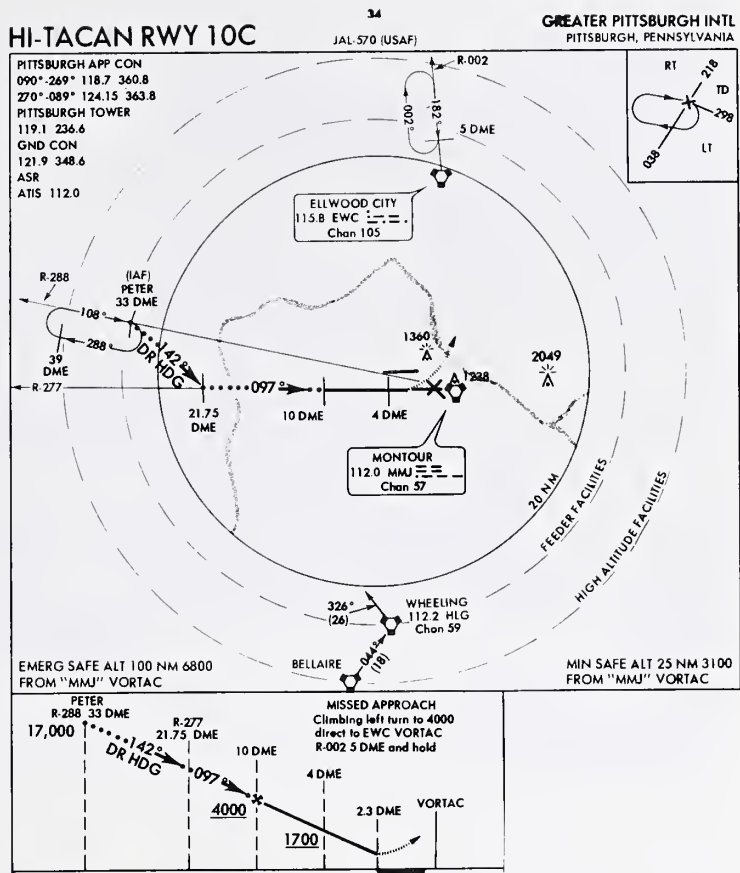
After an item or two, the copilot says "review approach," and you do. But where does it say to tune and identify in the traffic pattern checklist? Not a checklist line item, is it? Instead, it's in the ampli-

fied portion of "Approach — Review" for both B-52 and 135 aircraft. Double check your habit pattern. Is your personal *first* step to tune and identify when you hear "review approach?" Trying to fly an approach with the wrong navigational aid selected is not the mark of a professional pilot. And it won't happen to you if you keep first things first.

**Vectors to final** — A few unlucky pilots have asked for vectors to final and wound up being vectored to the penalty box instead. What's that? A vector to final puts you on course, at the right altitude, prior to the final approach fix (FAF). A vector to the penalty box is one that gets you to the course past the FAF, or one that gets you on the approach too late to descend to the FAF altitude. How can you keep that from happening to you? We have two suggestions.

First, remain position oriented to the FAF or the glide slope intercept point. Normally, that's just a matter of watching the DME.

Figure 1



Second, adjust the final heading if drift or a mis-computed intercept won't allow course intercept prior to the FAF. Is that really legal, some ask? Don't I have to maintain assigned heading? The answer is that not only is it legal, it is also good judgment and plain common sense.

A controller is using his/her best judgment in attempting to vector you to course. Depending on the weather and type of approach, the vector will get you to course generally between one and three miles prior to the FAF. It doesn't take much drift to play havoc with the intercept, and drift is usually the culprit. If you find yourself intercepting the final course too close to the FAF for comfort, correct for the drift and turn toward the course.

If drift is the problem, let the controller know, especially if you are the first aircraft back in the pattern. Controllers can crank in a correction factor for the next aircraft.

Finally, if you would like some more breathing room, ask for an "evaluation approach." The Air Traffic Control Handbook tells the controller you're asking for vectors to course at least two miles outside the approach gate. Since the approach gate is at least one mile prior to the FAF, the controller will be aiming you at the course three miles (or slightly more) from the FAF. The extra mile or two

might keep you out of a jam.

## DRIFT — TWICE

**Departures** — "Apply known wind correction to depicted DR legs." So says the book of Instrument Flying, paragraph 4-7, which talks about Standard Instrument Departures (SID). What's a depicted DR leg? For us pilots, that's a heading. It means correct for drift when you're flying a heading on a SID. (Stan Eval types are asked to refrain from attacking with this new found piece of trivia.) A degree or so drift is inconsequential. But this can come in handy when challenging 10-20° of drift at any midwestern base during the 12 months of the year when the wind blows.

**Approaches** — "Attempt to fly the depicted ground track by correcting for wind." Same reference, paragraph 6-9. Approaches often use headings to get you from one point to another. The same idea applies for an approach as well as a SID. If you look at the sample approach (figure 6-10) in 51-37, you will note the heading has "DR HDG" written under it in both the plan and profile view (See Figure 1). That is printed on some approach procedures, but not on others. Either way, correct headings for drift during the approach phase.

**T**hirty crewmembers settled into their seats in the briefing room at the 60th BMS, Andersen AFB, Guam. The two-star general smiled briefly and said, "I want you to know that I talked to the Kadena tankers after your air refueling. They told me that the last thing they heard from Flaky Flight as you disappeared over the horizon was, "Cheju Airways, Cheju Airways, Flaky Flight, please say again, say again, say again . . ." The assembled crewmembers laughed appreciatively and nodded in agreement to what Maj Gen Andrew Pringle, Jr., 3AD/CC said. They knew just how accurate the Kadena tankers' report had been.

This particular instance of communications difficulty was one of the many similar experiences encountered by the three crews from the 28th BMW, Ellsworth AFB, during the execution of what SAC termed a "Diversified Training Mission." Since this was a unique mission, I want to discuss how three H-model B-52 crews ended up in the South Pacific, and highlight some problems encountered in the planning and execution of the mission. The idea for a B-52H flight to Guam originated last year with a request from a 77th BMS crew for an off-station training flight to Andersen AFB. Though not then feasible, this idea was recently expanded and implemented by the operations staff.

Our crew had just returned from leave and were on alert on 1 June 79, when I received a call from Maj Tom Bennett, 28th BMW/DOTO. He asked that I stop by for a briefing on a special mission. At DOTO I learned that our crew, R-09, and two other crews from my flight, R-11 and R-13 had been selected, in Scheduling's words, "as the only flight available" to fly this Diversified Training Mission. As CINC "B" Flight, 77 BMW, I was to be the airborne commander. The crews were to be augmented with other members of the flight, two instructor pilots from training flight, one instructor navigator from the 37th BMS, and six crew chiefs. The mission was to be 22 hours in duration with at least two air refuelings, overwater navigation, low level through IR-982 in South Korea to a landing at Guam. The return flight had one refueling and a trip through IR-401 for a 14-hour flight home. Total distance: 16,760 miles. Maj Bennett and his associates had started initial preparation and the crews immediately started helping in the details of mission planning.

Time was important. The proposed takeoff was less than two weeks away. Information necessary to plan this mission began to arrive from SAC and the 3d AD. To help organize and accomplish the workload, crews were divided by specialty with the overall goal of leaving nothing uncovered. The pilots researched takeoff data, best altitude/fuel consumption combinations, communications procedures, enroute emergency airfields, mixed tanker/bomber ratios, missed air refueling possibilities,

# TWELVE O'CLOCK GUAM 200 MILES

**Maj Douglas B. Aitken**  
28 BMW, Ellsworth AFB

and enroute decision points. The navigators refined the initial navigational planning done by DOTO and established procedures to be used for the different parts of the mission. The radar navigators prepared IR-982 low level charts, did detailed target study, and assisted in establishing navigational procedures. For example, extensive SRAM programming was planned for the initial part of the mission while still over Canada and Alaska. A celestial shooting schedule was devised which gave each nav team the responsibility for celestial sighting. Though one crew would be primary for navigation during any particular time, emphasis was placed on crosschecking computations. Sharing of information was to be essential. The maximum range on the radar scopes was to be used where islands would be available for range and bearing fixes. To help insure a reliable radar system, aircraft cockpit temperatures were planned to be cooler than normal, and the radar was to be placed in standby when weather was not a factor and when no radar returns were available. The defensive team helped develop the special reporting and monitoring procedures, assisted the nav teams with chart preparations and based on the information provided by the 3d AD/DOTN, received extensive briefings from the 28th BMW Penetration Aids staff.

Staff support was essential, and it was excellent. DOTO coordinated the ALTRV and together with counterparts at 3d AD, provided most of the necessary information. A conference call with Andersen



to Capt Poff, 3d AD/DOTO helped clarify many questions. Staff support in terms of target study, T-10s of Korea, CPTs for Andersen approaches, and defensive team briefings proved to be invaluable.

In this detailed planning phase, the changes in the composition of the SAC crew force over the past five years became readily apparent. There are very few fliers with ARC LIGHT experience still on crews; consequently, the experience level for over-water navigation, HF position reports, and extended cell operations is fairly low. As a result, we tended to reinvent the wheel, discovering items which though new to us, would have been old hat to ARC LIGHT participants. The 28th BMW Vice Commander, Col Charles C. McDonald, noted in his comments concerning the after-action report that, "It's interesting that so many items seem old hat when you have had international flight experience, but caused or could have caused problems." Only two of the 30 crewmembers had ever been to Guam, and none had ever participated in a mission of this scope or complexity. So we had to "what if" all possibilities — not really a feasible task, but a valuable one nonetheless. During this process, we relearned two old adages: "Be flexible" and "Prior planning prevents poor performance." This "what if" approach helped prepare us for some of the confusing factors during the flight itself, thus helping to preclude a poor performance. Flexibility was essential, especially during mission planning, for there were many changes to the mission, for a variety of

reasons, and they came rapidly. A change from three to two air refuelings enroute to Guam necessitated recomputing fuel loads, takeoff performance, and enroute decision points. Fuel became a critical factor. If we were not on our fuel curve prior to the second planned air refueling south of Japan, we would have to skip even attempting that refueling and the low level and divert directly to Guam to arrive there with our peacetime fuel reserves. Additionally, fuel considerations and a long takeoff roll due to a combination of heavy gross weights and high temperatures and pressure altitudes necessitated a routing change the day before takeoff. A MITO departure had been planned, but the MITO tracks terminate northeast of Ellsworth. It had become evident we would need the extra 8000 pounds of fuel that canceling the MITO departure would provide. Thus the MITO was scrubbed, and we planned for takeoff with one-minute spacing with on-course radar vectors. By Tuesday, 12 June 79, the day before takeoff, the problems were all solved, and after extensive briefings on cell procedures, air refueling, communications requirements, seat swaps, low level rejoin, customs and the like, the crews felt ready to begin.

Maj Bennett conducted the predeparture briefing at 0930L, Wednesday, 13 June. After expressions of good luck by the senior staff, the crews loaded their buses and proceeded to their aircraft for preflight. Other 77th BMS crews had conducted buddy preflights and had worked with the crew chiefs to clean



up any last minute discrepancies. The wing DO had been monitoring the temperature all morning, as it had been rising rapidly and seemingly would far exceed the forecast. Plans had been made to reduce the fuel loads by 8,000 pounds to facilitate a takeoff on the upsloping runway 31. However, as the winds began to shift to the predicted southerly flow, the DO decided to go with the planned fuel loads. As the takeoff time drew near, the temperature skyrocketed to near 100 degrees, and the winds abruptly shifted back to a northerly direction. These conditions would have precluded a takeoff using peacetime criteria. Fortunately, the winds changed again and the takeoffs progressed smoothly. HF radios were checked by calling Guam on the departure and telling them we'd be on final approach in 22 hours.

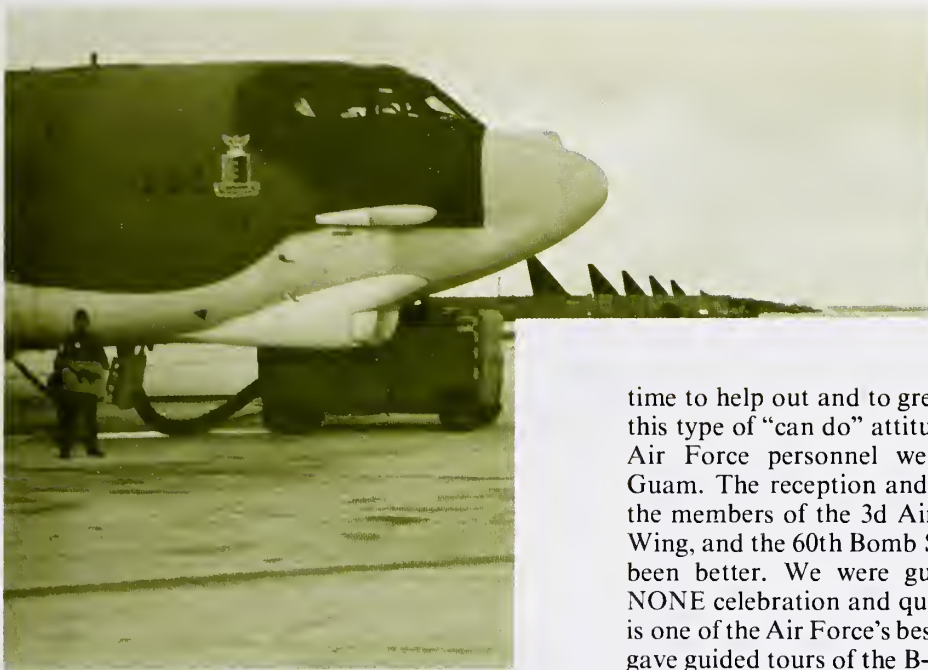
Weather remained excellent over Canada and Alaska, and we did not encounter our first *glitch* until our first planned air refueling with three tankers from Eielson AFB. All six airplanes were where they were supposed to be, but somewhere along the line, the two flights had received two different UHF frequencies good old HF air refueling common frequency saved the day again, and after we all went to UHF primary, the remainder of the rendezvous went smoothly. Each Buff unloaded 120,000 pounds of JP-4 with no difficulty, though Flaky Three had to use manual boom latching due to a system malfunction. Bidding farewell to our now lightweight tankers, we conducted our planned position change and proceeded north of the Aleutian Islands. Shemya Command Post provided a bit of comic relief; when asked for traffic, they replied, "We have four seagulls on final and a reported 32 females on base."

Navigation along the Aleutians to the east of Japan was no problem as there were many, but distant, radar returns. During this portion of the flight, we called Andersen AFB on HF for a low level weather update and a prognosis on Andersen weather for our arrival time. It was during this HF contact that we learned we had planned ourselves

through a large, restricted area for our second random track refueling. Our Kadena tankers found this mistake (sorry guys) and were planning to alter south around this area. This necessary deviation meant that timing control for low level entry which came immediately after air refueling would be really tight. During the rendezvous Flaky Lead developed radar problems and had to pass the rendezvous to Flaky Two. This was one of the contingencies which had been prebriefed, and Flaky Two took over and conducted an excellent rendezvous in marginal weather. Each B-52 unloaded 82,000 pounds with Flaky Three hanging in there, still using manual boom latching.

This was the busiest time of the mission with ADIZ penetration and reporting requirements for both Japan and Korea, air refueling and breakup in a compressed altitude block in bad weather, plus low level checklists to complete. It was right after this air refueling that the incident General Pringle referred to took place. We had been warned by the folks at Guam about communication difficulties in this part of the world, and they weren't kidding. Communications with English-speaking Korean and Japanese air controllers requires a great deal of





patience — by both parties. The controllers were extremely patient; on one occasion they even spelled out a word we had difficulty understanding.

The navs did an outstanding job of getting us to the low level entry point on time, with 15-minute spacing between aircraft. It was dusk with a lot of haze as we entered the low level route and visibility was not great, but the navs and radars kept us all on course centerline throughout the low level route. All three crews were given excellent scores on their bomb runs, even though good old Flaky Three lost their radar picture and had to rely on their bombing computers and SRAM for release. Flight rejoin was accomplished at 23,000 feet in a precleared restricted area west of the South Korean coast. It was at this point in the mission that the adrenalin stopped flowing and fatigue really became a factor. The tough part of the mission was behind us, the sun had been down for some time, and the bleakness of night reminded us that we had been flying 18 hours, that it was 0230 Thursday morning Ellsworth time, and we were ready for bed! Radio chatter increased noticeably as we fought both thunderstorms and fatigue for the remainder of the flight into Guam. Everyone perked up when lead announced, "Tacan lock on. Guam 12 o'clock, 200 miles." The flight took spacing when 100 nm from the field, and it was a good feeling to pick up the approach lights and have Andersen's ski slope runway jump up and greet us on landing.

Though it was 0200 Friday morning Guam local time, the folks at Andersen were ready for our arrival. For example, the crew chiefs who were there to recover the aircraft had previously been stationed at Ellsworth and had come out during their off-duty

time to help out and to greet old friends. We found this type of "can do" attitude to be prevalent in the Air Force personnel we encountered while on Guam. The reception and hospitality provided by the members of the 3d Air Division, 43d Strategic Wing, and the 60th Bomb Squadron could not have been better. We were guests at the 43d's BUY NONE celebration and quickly learned that Guam is one of the Air Force's best kept secrets. We in turn gave guided tours of the B-52H and tried to explain to the D-model jocks how the H manages to fly with such a short tail. Additionally, we did our part to keep Guam "green" by making visits to the BX and many local shops. At first, we experienced some difficulty in adjusting to the 16-hour time zone change, and just about the time our physiological clocks were in tune with the rest of Guam's population, the time to depart was upon us.

At 1230L, Monday, 18 June 79, loaded down with many purchases and \$10,000 poorer (rumor has it the Agana Chamber of Commerce cried when we left), Flaky Flight proceeded to the 60th BMS briefing room and was briefed by General Pringle. After a discussion and briefing on taxi/MI-TO procedures, we thanked our hosts for all their help and hospitality and proceeded to our aircraft. Professional pride being what it is, we really wanted to put on a good show for the D-model troops during our MITO departure. Flaky Flight was successful in this endeavor, and though a hung gear on our aircraft caused an anxious moment, that problem was soon resolved. We were rejoined climbing eastbound into the dusk, bidding farewell to Guam and our excellent hosts.

The return flight, though shorter than the trip over by about eight hours, actually seemed longer. It was really a relief to see the sun come up over the Pacific; the B-52s and their large contrails made a beautiful contrast against the reddish-orange reflections of the rising sun. All the preplanning the nav teams had done really paid off during this leg as we proceeded eastbound to Wake Island. The preciseness of their navigation amazed one of the copilots who announced, "I've got a lock on Wake Island Tacan at twelve o'clock." To which a confident nav replied, "Never a doubt." **Continued on Page 21**

# OPS HAZARDS



## NOT A SNOWBALL'S CHANCE IN...

**T**he following is a recap of a mishap which occurred last winter. Since the winter season is already here for some of us, we should all review winter lessons learned.

A commuter airliner crash last winter was caused by the pilot's decision to take off with snow on the aircraft's wing and tail surfaces, the National Transportation Safety Board reported. The snow reduced aerodynamic lift and caused the pilot to lose control of his aircraft shortly after takeoff. The copilot and one passenger were killed when the modified twin-engine plane crashed upside down about 14 seconds after liftoff. The pilot and seven passengers were seriously injured.

The aircraft had been de-iced 20 to 30 minutes before it left the ramp, but the Board found that about a quarter of an inch of wet snow had accumulated on the top of the wings and horizontal stabilizer after the de-icing.

The pilot could remember nothing of the mishap but eyewitnesses said that after a normal takeoff roll and liftoff, the aircraft rolled both to

the right and to the left before the right wing struck the runway. The Board concluded that snow which had adhered to the outboard surfaces of the wing, in addition to reducing lift, had rendered the ailerons "at least partially ineffective" after the plane climbed out of "ground effect" — the cushioning effect which increases lift and reduces drag when an aircraft is airborne but still close to the ground.

A professional pilot always "must take the proper measures to insure that the wings, stabilizing surfaces, and control surfaces are clean and free of ice, snow or frost before he attempts a takeoff," the Board said. "Any doubts . . . must be resolved by visual inspection, if necessary, immediately before the takeoff is begun."

The Board's formal determination of probable cause was "the pilot's decision to take off with snow on the aircraft's wing and empennage surfaces which resulted in a loss of lateral control and a loss of lift as the aircraft ascended out of ground effect."

With the help of Anna Baumgartner, Miss Rapid City, (who drew spirited recognition from the crowd on several occasions), the drawings were held to see which teams would do what and when.

General Ellis also emphasized two significant reasons for the Giant Sword competition as, "First, the skills and professionalism you demonstrate during this competition send a clear, unmistakable message to those throughout the world who challenge us that the men and women of SAC mean business. And make no mistake about it, they pay attention to what you do here . . . a lot of attention . . . and from what I've seen, they have good reason to worry because you are the best crew chiefs, munitions teams and security police teams I have ever known.

"The second reason for GIANT SWORD is as important as the first and centers on what you do after the competition is over. The entire command will benefit from the skills and experience you have gained during this competition when you translate that know-how into new and better ways to get the job done back at the wings."

The only Giant Sword trophy which is not won through scored competition is the "Spirit Bell" award. This award goes to the wing which demonstrates the most spirit throughout the competition as determined by a vote of all the competitors. This year's winner was the 416 BMW, Griffiss AFB. Gen



Ellis presented this award to the entire Griffiss team during the closing banquet.

This year the people from Ellsworth AFB did another outstanding job in hosting Giant Sword. Many weeks and long hours of preparation went into this year's event. Comments heard from the competitors and competition staff were highly complimentary of the job done by Ellsworth's people.

As the competitors departed there was no doubt that thoughts were turning toward Giant Sword '80. For some the thrill of victory had come in '79, for others it will be in 1980.

## THE WINNERS

### BARRENTINE TROPHY

Minot 5 BMW

### BEST MUNITIONS LOAD

Carswell 7 BMW

### BEST CREW CHIEF

Fairchild 92 BMW

### BEST SECURITY POLICE TEAM

Blytheville 97 BMW

### BEST MUNITIONS LOAD

Carswell 7 BMW

### BEST B-52 LOAD

Carswell 7 BMW

### BEST FB-111 LOAD

Pease 509 BMW

### BEST SRAM LOAD

Ellsworth 28 BMW

### BEST MUNITIONS EQUIP

Carswell 7 BMW

### BEST CREW CHIEF PRELOAD

Griffiss 416 BMW

### BEST CREW CHIEF POSTLOAD

Loring 42 BMW

### BEST SPS PRACTICAL EXERCISE

Blytheville 97 BMW

### BEST SPA MARKSMAN

Ellsworth 44 BMW

### BEST MMS TESTING

Pease 509 BMW

### BEST OMS TESTING

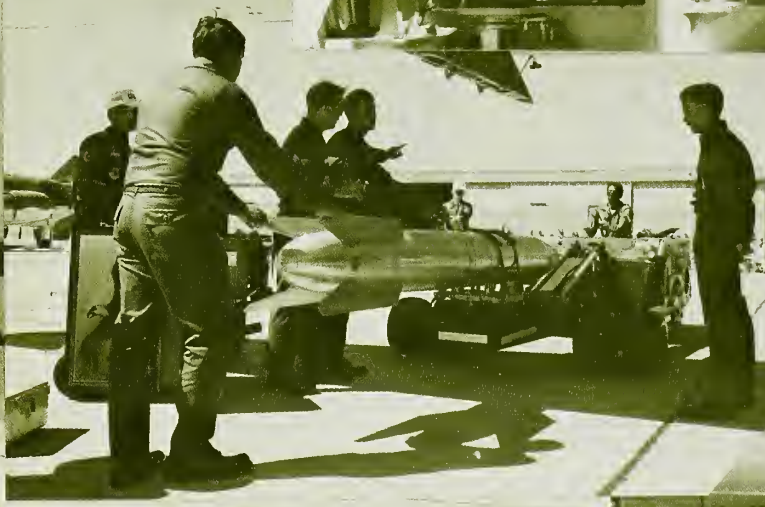
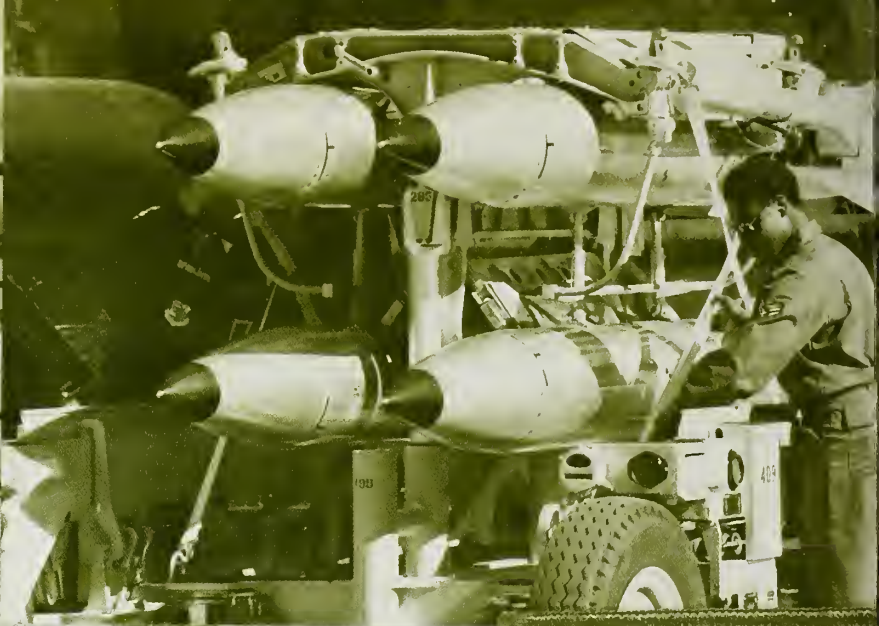
Fairchild 92 BMW

### BEST SPS TESTING

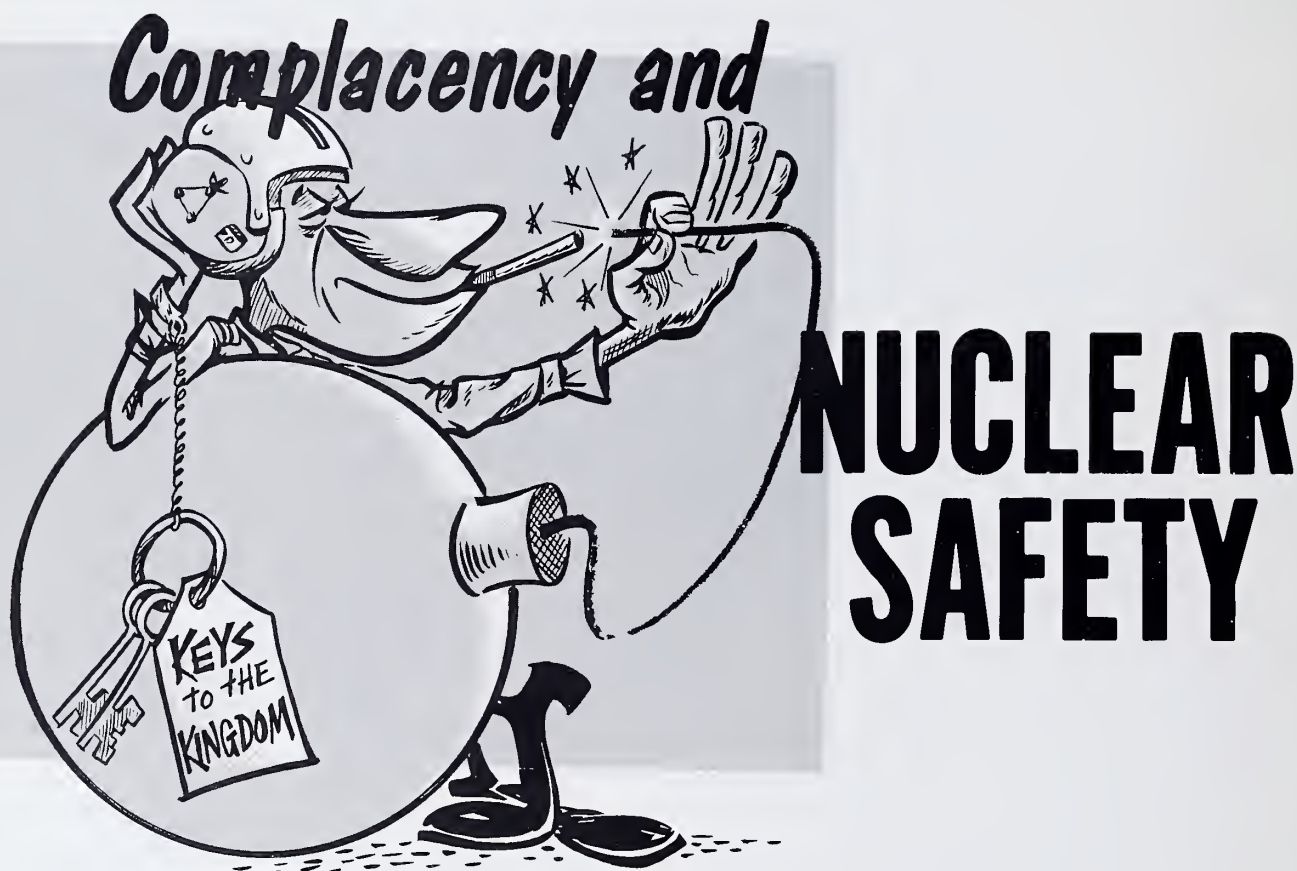
Loring 42 BMW

### SPIRIT BELL TROPHY

Griffiss 416 BMW







Capt Curtis M. Schantz  
2Lt Allen T. Lewis  
321 SMW, Grand Forks AFB

**I**n March 1979, a control valve malfunctioned at the Three Mile Island nuclear power plant near Harrisburg, Pennsylvania. This relatively minor incident set off an unbelievable chain of mechanical and human failures that escalated into the worst commercial nuclear accident in the history of the United States. Within hours, various national groups took to the streets in protest of nuclear power, and a very sensitive Congress has been immersed in debate over the merits of nuclear energy ever since.

The United States has had nuclear weapons in its inventory since 1945 and has never had an accident that produced a nuclear yield. This perfect record must be maintained because one such accident

could have unacceptable political consequences and result in serious restrictions on our strategic defenses.

To ensure that a nightmare of such a horrendous scale does not occur, the United States Air Force developed a nuclear safety program based on the four Department of Defense safety standards:

1. There shall be positive measures to insure adequate security of nuclear weapons.
2. There shall be positive measures to prevent nuclear weapons involved in accidents, incidents or jettisoned weapons from producing a nuclear yield.
3. There shall be positive measures to prevent deliberate prearming, arming, launching, firing or

releasing of nuclear weapons, except upon execution of emergency war orders or when directed by competent authority.

4. There shall be positive measures to prevent inadvertent prearming, arming, launching, firing, or releasing of nuclear weapons.

To carry out this program, the Air Force insured that safeguards were built into each weapon and delivery system, making an accidental detonation all but impossible. But since any accident may possibly be traced to human error, the Air Force had to develop tools for adequate human error control. This was accomplished by the Two Man Concept and the Personnel Reliability Program. The perfect record of the Air Force speaks well of the success of these programs. However, the danger of complacency is always present.

Complacency often leads to shortcuts in operating procedures and shortcuts can result in accidents. The most common cause of this chain of events is the apparent routine nature of the jobs many of us perform. Given the enormous destructive potential of the systems for which we are responsible, we must not allow this to happen. Procedures have been established for a reason and deviations or shortcuts can not be tolerated. Consider the consequences of the following examples:

1. A two man team begins work on a piece of equipment in the Launch Control Center. One member of the team is distracted and doesn't pay complete attention to the task being performed.

2. A Job Controller delays having a malfunctioning missile safed because it will reduce his alert rate.

3. Members of a two man team decide to split up the maintenance tasks they are assigned in order to speed up the job so that each can get on with other more pressing personal tasks.

4. A Missile Crew Member allows a maintenance team to perform a "30 second" launch tube water check without safing the missile because the team chief told him it would only take a minute.

Each instance mentioned is a deviation from a proven procedure and could easily have resulted in a major accident. Can we be so tolerant as to allow these conditions to exist? Can we afford the high cost of complacency?

The Air Force can not allow itself to be handicapped in this way. The consequences generated by a public outcry for drastic corrective procedures in the event of a nuclear accident could seriously undermine our position of strategic deterrence. To root out complacency, we need you. The next time you go on alert, dispatch to the field or flightline, or work and handle nuclear weapon components, think nuclear safety. The defense of our nation depends on it.

# DEBRIEF



Captain William O. Nelson, a pilot stationed with the 4th Airborne Command and Control Squadron at Ellsworth AFB, South Dakota, has completed more than 350 sorties in the Accelerated Copilot Enrichment (ACE) program. This is more than any other ACE participant has accumulated to date. Flying T-38 "Talon" aircraft, copilots in the 135 series and B52 aircraft maintain proficiency in instrument flight and approach procedures for a small fraction of the cost that would be incurred using the larger aircraft in which their missions are normally flown. Crosscountry flights enhance the copilot's decision-making capabilities and they provide experience in operating out of airports other than the copilot's home station. Captain Nelson has visited 42 of 50 states in the 2½ years that he has been flying ACE.

# NO LAUGHING MATTER

Clifford E. Moore  
320 BMW, Mather AFB

**B**eing injured or hospitalized is a thing that most of us believe is something that happens to other people. We take up donations, send flowers and at times attend funeral services for someone who used to be our friend or fellow worker. Of course, we are always sorry to hear about the other guy's situation but for some reason fail to realize that he also believed he would never actually become a victim.

Near miss or injuries that are slight in nature get laughed off and go unreported. Someone who experiences a close call would probably say, "Boy, that sure was close!" and continue making the same poor habit forming mistakes. We try very hard to avoid mistakes that might cost us money even though money is a replaceable item. How is it then that we are so careless with arms, legs and our precious eyesight?

Accepting and adjusting to live without one of your limbs that was lost due to your own misconduct would be a difficult task. There is a saying that goes, "If you play, you pay." Unfortunately, there are injury causing accidents that affect innocent people. Even some that are safety conscious and never engage in unsafe activities.

There is always someone you can find working with power tools, drilling, grinding, hammering that refuse



to wear protective clothing because things like safety goggles are a pain. Of course they don't see the problem. Where do we get a new pair of eyes after we have lost our vision?

The last thing I would suggest is that we put an end to enjoyable activities or stifle humor. The point that is being stressed here is that accidents occur quickly and can be deadly to you and those around you. There is

no room for horseplay at work. Before you release that object that you are about to throw, the hammer, drill or whatever you are about to use, **THINK** about where it is going to land. For the split-second of unplanned carelessness, you or your friend may spend the rest of your days, if any, in total darkness or win the privilege of getting to use those wide parking places provided for special people.

## GUAM

Continued from Page 13

The rendezvous and refueling off the California coast with two tankers from Mather went smoothly. These tankers, like all the others on this mission were right on time. After finishing air refueling, we proceeded to coast inbound and took up spacing into IR-401. Low level was again uneventful, with all three aircraft again achieving reliable releases.

It was good to see the home drome again, although we could have done without the 250-foot ceiling and rain which greeted us. An added touch was provided by a thoughtful squadron staff who made sure that wives and fiancées were also there to meet us as we disembarked from our aircraft.

Maintenance on the aircraft was outstanding. The six crew chiefs who accompanied the crews had put in many long hours to insure their "Buffs" were in the best possible condition. While at Guam, they worked closely with the Andersen contemporaries to prepare for the return flight. A milestone for the B-52s was also achieved, as SrA Shirley M. Goedken was the first female crew chief to ever go to Guam on a B-52H. All in all, the decision to take the crew chiefs along was an excellent one — not only for the fine work they did on the ground, but also for the assistance they gave while airborne.

There were some glitches in the mission, both in the planning and execution, but they were minor and did not detract. In fact, they added to the mission, giving the crews valuable experience in applying flexibility in flight.

This mission truly lived up to its billing "Diversified Training." It would be difficult to imagine a more realistic training mission for all crew positions. The crews gained valuable experience in the planning and preparation process. Additionally, the pilots found there to be a considerable difference in the pucker factor in onloading 5000 pounds of JP-4 on a routine training flight and onloading over 200,000 pounds, especially when it was essential to get all the gas to be able to continue the mission. Lead responsibilities were rotated during the two flights so each crew gained more experience than had it remained as number two or three for the entire trip. The navigators gained needed expertise and confidence in overwater navigation, in precise time control on a mission of long duration, and in station-keeping procedures. Additionally, programming the SRAM was different from the normal stateside procedures, especially on the return flight. The radar navigators gained experience in



77th/37th BMS plaques presented to 60th B.M.S. Commander LTC Jesse J. Waldon, Jr., by Flight Commander Major Aitken.

enroute navigation and in flying an unfamiliar low level route while fatigued. The EW officers were able to observe some actual signals. Finally, while the gunners became experts in station keeping, future flights of this nature should incorporate fighter activity or a fire out somewhere during the mission.

An added plus which became evident as the mission evolved was in keeping the mission as a flight operation. To quote from the after-action report: "An additional benefit derived from this mission was the enhancement of flight esprit and morale . . . I also gained a better appreciation for the abilities and dedication of the members of my flight. I strongly recommend that all further missions of this nature continue to be oriented towards the flight concept. It certainly has enhanced the value of the commander's concept of flight operations."

In sum, this mission gave us the best training possible, with realism that is simply not possible in a stateside environment. The SAC crew force does not have the same experience level in this type of mission as the crew force of the ARC LIGHT era, but with Global Shield and our Diversified Training missions and others like it, we are helping to once again raise that experience level. Hopefully, the success of this particular mission will help insure others like it in the future. As General Pringle said in his message to the 28 BMW/CC, "Your performance adds another successful chapter in the development of air power readiness." As a direct result of our having been a part of this mission, all flight members have an increased confidence in their ability to successfully accomplish their primary mission. We sincerely hope that other wings, squadrons and flights can be given the same opportunity.



## SIMULATING IN THE T-4

Captain Ronald D. Swenson  
CFIC B-52 Brn Instr EW  
Castle AFB, CA

**A**ny simulator that man uses for his training has both advantages and disadvantages. One advantage that comes to mind in these inflationary times is cost. Any trainer that can simulate an aircraft mission has the capability of providing training for "mini-bucks" compared to the "mega-bucks" required to operate a large aircraft.

The fact that the instructor controls the training environment is another plus. A student may require only a single particular type of training. By stepping into the trainer, the student and instructor may concentrate only on this activity. There is no need to fly for 10 hours to accomplish a series of ECM runs when the T-4 is available to satisfy this need.

Speaking of 10 hour missions, let us consider how much ECM training is actually accomplished on one. Equipment checks take about 30 minutes. Then about five minutes are needed for the equipment set and another five for simulating the HHCL. Threat area tactics, the ECM run, and terminating threat area tactics require an additional 20 minutes. By the time we have terminated counter-measures we have practiced pure ECM for a total of 61 minutes. For additional ECM runs we can add 20 minutes each. When we add mission preparation and de-briefing we find that ECM related activities comprise less than 10% of the time spent. A well prepared instructor can provide two hours of ECM training in a two hour T-4 period. The efficiency of this training should be readily apparent.

Another "efficiency" is present because some "simulation" in the simulator is actually more realistic than it is in the aircraft. This is due partly to the restrictions imposed on actual ECM operations in the U.S. Some inflight ECM cannot be practiced due to the high probability of electronic interference with friendly defenses, aircraft controller radar, television, radio, etc. In the trainer, all of the equipment can be operated as if the student was in an actual combat environment. No electronic emission leaves the trainer circuitry.

Another environmental advantage lies in the radar signals provided by "the computer" to the trainer's receivers. These signals are generated to appear more comparable to enemy signals than the NORAD and STR signals do. The trainer also provides more of the actual radars associated with the threat than found at the STR site. A heavier concentration of these threats are available in the T-4 as well.

Controlled malfunction training is another benefit. Although not likely, it is possible to go for many missions without experiencing a malfunction. There are numerous tactics which can be employed to partially overcome the effects of equipment malfunctions. The trainer instructor may drill his student on many of the possible equipment malfunctions.

Probably one of the most significant advantages comes from the "Law of Exercise." In the trainer, the instructor may explain, demonstrate, observe, critique, and repeat any portion he feels is needed.

The student can gain skill rapidly with this repetition.

Other advantages concern crewmember comfort. These environmental factors are noise, temperature, and turbulence. Without high noise, erratic temperature, and turbulence the student is more likely to find his training less distracting. The absence of these factors may also find themselves on the list of disadvantages. Without them the mission simulation is just not realistic. The student may find himself proficient in the trainer environment but something less in the actual aircraft environment. The student can actually hear chaff and flares counting in the trainer but the aircraft air conditioner and engines provide a totally different environment.

One of the most important training items that cannot be effectively accomplished in the trainer is crew coordination. The instructor can simulate each of the other crewmembers on the interphone but somehow it is just not the same. Most instructors do not possess the voice of five different crewmembers plus his own.

Another training item that can be pretty plastic in the trainer is communications. One of the most realistic attempts at communications training is to listen to actual recordings of various activities. This is of course very difficult for the instructor to synchronize to other training being received.

Other training that cannot be accomplished in the trainer consists of aircraft preflight and celestial procedures. Although these are not strictly ECM related tasks, they are certainly a part of the EW crewmember duties. Fortunately they can be practiced adequately on the available flight missions.

A final limitation of the trainer concerns the sterile environment that the receivers live in. Since the computer is sending preprogrammed signals to them, they respond without considering the variables present in the real world of electromagnetic energy. Signal presentation is therefore close but not absolutely realistic.

Once the instructor totally understands the advantages and disadvantages of the T-4, he can more effectively begin his preparation to teach his student. He can plan to benefit from the advantages

and work around the disadvantages. When a disadvantage could distract from the students training, the instructor will want to be ready to explain the situation.

A well prepared instructor knows that there is more to T-4 preparation than reviewing regs, manuals, and lesson plans. He must also consider the students background. If the student is a well seasoned crewmember, then the instruction should avoid basic knowledge of equipment operation. It should go beyond that into a challenging experience for the student. An inexperienced person would be challenged sufficiently with more basics.

When the student and instructor arrive at the T-4 they preflight the forms and equipment thoroughly but quickly. They will want to know what to expect from the trainer. Then the instructor will brief the maintenance personnel of his requirements and type of mission. He will carefully present his student briefing so the student will be in the right frame of mind for maximum learning.

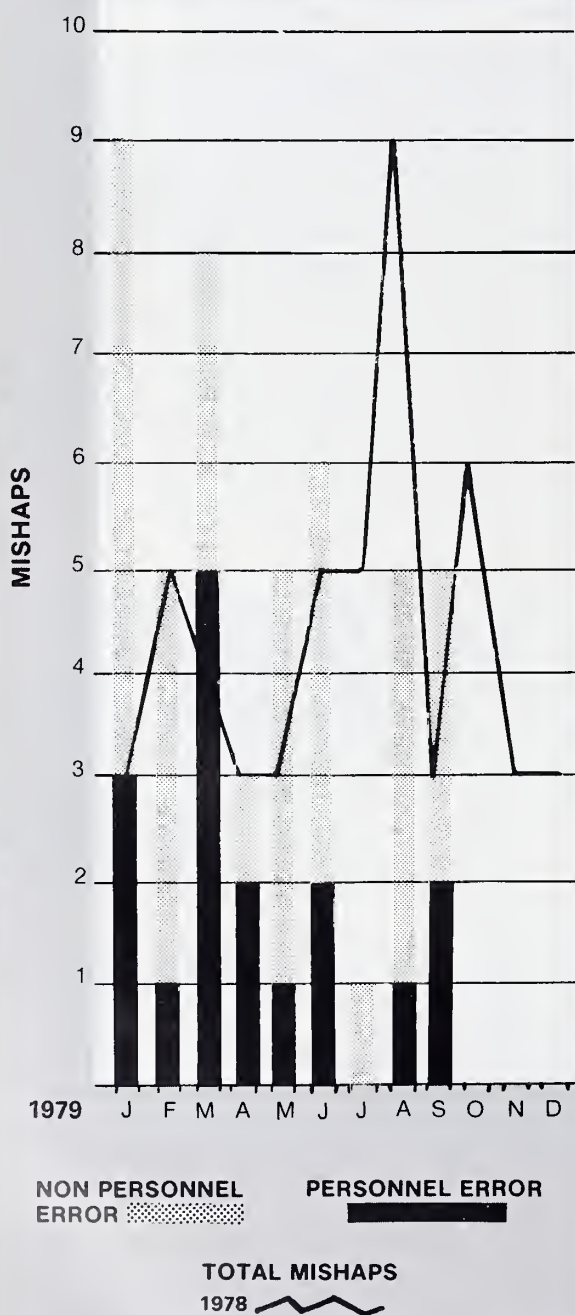
Next comes the actual mission. By following his lesson plan the instructor can insure that his student is receiving all of the training "as advertised." His instructional techniques come into full bloom during the mission. He will need to operate the console, observe the student, and make appropriate comments to his student as necessary throughout the mission. Some comments of course must be held until the critique at the end of the mission. When they are complex enough to interrupt the normal flow of learning these comments are best saved until later. Good notes will enhance the effectiveness of this technique.

When it is time for the critique the instructor and student are entering a very important phase of the learning process. If the instructor is well prepared and has good enough notes to recreate the situation, he has the opportunity to pass on a great deal of experience and proven technique. He should summarize the entire mission and emphasize the high points as he feels the need. These specific areas of need may warrant the bulk of the time spent in the critique.

No matter what type of training is being "simulated in the T-4," a well prepared instructor can make the difference whether or not the training is going to be effective. Don't miss your chance to achieve your full potential in the trainer.

# Missile Mishap Report

DOD CLASS A, B and C



## MOTOR CONTROL CENTER ELECTRICAL FIRE

A missile crew chief and a trainee cycled circuit breaker CB-1 to Off then to On, demonstrating to the trainee the emergency lighting capability. They closed the panel door to CB panel LS-3 and approximately 1-2 seconds later something shorted out. Sparks and flames were visible at the bottom of MCC-1 below transformer TR-2. An attempt was made to remove power but they could not get near enough to trip the lever due to flames and arcing. Normal power failed when CB52N opened automatically. The technicians were directed by the missile crew to evacuate to the control center. They noted the diesel generator running at low rpm under a heavy load and swinging violently (2 feet side to side) as power was transferred to diesel generator. Smoke was heavy in silo level.

The technicians then notified the missile crew of fire via emergency phone. The diesel generator failed after technicians arrived in control center. The MFT and BMAT members donned CHEMOX and responded to silo level 3. They encountered heavy smoke and the top right leg of MCC-1 was on fire with severe arcing within the unit. Attempts were made to extinguish fire using CO2. Crew members withdrew to the control center due to limited time remaining on CHEMOX timer, donned fresh CHEMOX and returned to silo. The fire was out at that time. The power company removed all power from site.

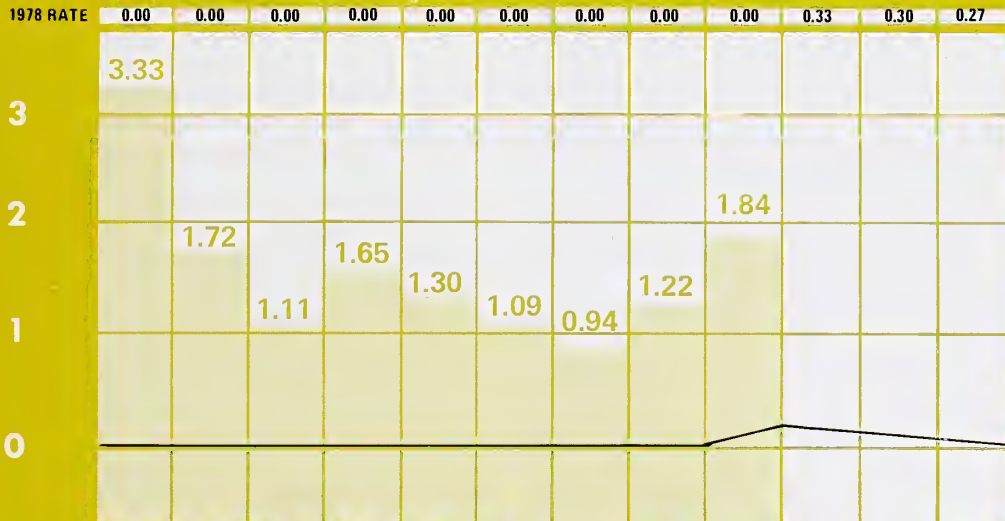
Investigation revealed a metal rod of unknown origin 1/8 inch in diameter and 12-14 inches long rolled onto slab connectors behind transformer 2 (TR-2) circuit breaker panel. A very high current short resulted and even though normal power was lost, diesel generator power came on the line and applied power to the secondary bus bar reinitiating arcing and fire.

Continued on Page 27



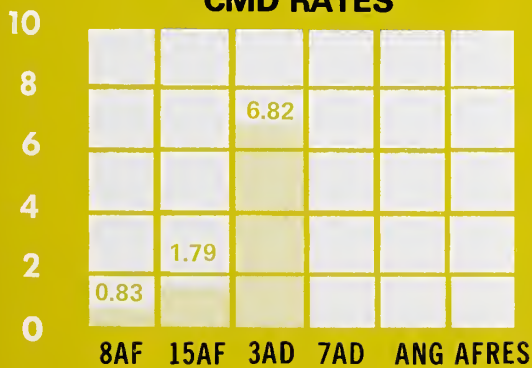
# 1979 Flying Safety Rate

## SAC CLASS A MISHAP RATE (PER 100,000 FLYING HRS)



| MISHAPS | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1978    | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   |
| 1979    | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 2   | 0   |     |     |

## 1979 SUBORDINATE CMD RATES



## MISHAP STATUS

B-52H  
KC - 135Q  
RC - 135  
FB-111  
KC-135

JAN 79  
APR 79  
AUG 79  
SEP 79  
SEP 79

LEGEND  = 1978 RATE (SAC)  
+ = ANG  
\* = AFRES

# r&d corner

HQ/SAC — DIRECTORATE OF AERONAUTICAL REQUIREMENTS

## *A look at the ASALM*

**Captain Gene L. Harbula**  
HQ SAC/XPHD, Offutt AFB

**I**n 1973, HQ SAC Plans Deputate identified a need for a penetrating bomber defense suppression missile. Initial SAC system requirements envisioned a design which would capitalize on technology advances in speed, radar cross section (RCS), and guidance systems. This proposed new weapon system would be the SRAM of the future, should SRAM become either vulnerable, performance deficient, or unsupportable.

As the Soviet threat continued to emerge, this need developed into a requirement. That requirement took the form of a Required Operational Capability (ROC) for a SRAM-sized Advanced Strategic Air Launched Missile (ASALM). ASALM's contribution to bomber force effectiveness would be significant, offering primary strike and defense suppression of selected ground and/or airborne targets. The new strategic air-to-air dimension would preclude early detection of arriving bombers by the Soviet Union Airborne Warning and Control System (SUAWACS). The air-to-air mission of ASALM is to destroy the AWACS before it can

detect the carrier-bomber. The SUAWACS long range acquisition radar forces the carrier aircraft to employ various tactics to meet the bill before detect criterion. One such tactic is to passively detect the SUAWACS at the radar horizon, then descend below the threat's radar line-of-sight. The ASALM is then launched on azimuth information as the carrier continues descending below the radar horizon until ASALM engages the SUAWACS. The SAC ASALM ROC was validated by the Air Staff in June 1974 and the acquisition process was set in motion to meet the mid-1980s threat.

The Air Force selected two primary ASALM contractors: McDonnell-Douglas and Martin Marietta. Since contract award, both companies have aggressively advanced the state-of-the-art required to ensure system effectiveness and survivability.

The predicted ASALM capabilities will provide significant flexibility in striking an enemy's economic resources, political leadership, military command and control structure, nuclear offensive forces, and

conventional military forces. Additionally, with its bomber-defense capabilities, the ASALM would enhance the penetrativity of its carrier and provide a significant increase in the carrier's survivability.

The ASALM operational concept relies heavily on speed, low RCS, trajectory, and range to enhance bomber penetrativity. Speed will permit employment against certain time-urgent targets and reduce intercept opportunities by defensive systems. ASALM will use integral rocket ramjet technology to permit low and high altitude supersonic flight. This process involves rocket motor acceleration to supersonic speeds where ramjets begin efficient operation; ramjet operation then takes over to boost the speed to a near hypersonic regime. ASALM's high speed, in combination with a low RCS, will place a large number of hardened, terminally defended targets at risk while significantly reducing ASALM detection and intercept.

Another added capability of ASALM is its split launch profile. ASALM can be launched from high altitude, cruise for added range, then transition low to reduce detection and intercept opportunities, prior to terminal maneuvering and engagement; or, should the scenario dictate, launch from a low penetrating carrier, and either remain low until terminal impact or transition high for added range as mentioned above.

As the defensive environment expands in numbers and sophistication, penetrator tactics will mandate the launch of defense suppression systems such as SRAM or ASALM before they become vulnerable to detection techniques and SAM attrition. ASALM offers the range to meet that threat into the early 1990s and beyond.

Initial ASALM efforts had been directed mainly at providing armament for the B-1, with secondary consideration for the B-52G/H and the FB-111A. In December 1977, the ASALM program was reoriented to emphasize B-52 carriage and to accelerate system development.

ASALM, like many programs in the fiscal competition arena, is intricately involved in the systems acquisition process. That process is flexible in that periodic reviews of the requirement and program progress can accelerate, delay, or cancel a program. As a program progresses, resources are committed incrementally after successful demonstration of milestone accomplishments. ASALM will meet its first milestone event in 1979 when the rocket ramjet propulsion system is tested and validated. DSARC I is planned for January 1980.

After propulsion validation, ASALM development could effect a mid-1980s operational capability. Deployment at that time would represent a cost-effective and timely option for ASALM. SAC strongly supports ASALM for current and future penetrators, as well as cruise missile carriers.

## MISSILE MISHAPS

Continued from Page 24

Recommendations implemented include a power-on inspection IAW SAC CEM 21-SM68B-6, Work Card 35, Steps 3 and 4 and a detailed power-off inspection annually. In addition, appropriate warnings to be placed in checklists and decals on units to insure tools and work materials are removed following maintenance on motor control center circuitry.

### LF SECONDARY DOOR (B-PLUG) LOCKOUT

**A**t some unknown time, a team incorrectly installed the electro-mechanical linear actuator wiring harness. One of the ten wires of the harness fouled as it was inserted through the flex conduit to the linear actuator control box. An additional wire was installed between terminals one and two of TB 1 inside the linear actuator control box. This jumper wire effectively bypassed the secondary door locking bolt sensitive (Lockout) switch and would not allow the interval (secondary door) timer to be reset. This condition would energize the B-Plug linear actuator. In addition, one wire of the wiring harness furnishing three phase power to the linear actuator motor was loosely connected. A penetration was attempted on 9 August 1979 by a depot team but was unsuccessful. LF forced entry was accomplished on 20-21 August 1979. The B-Plug and linear actuator have been removed for repairs and replaced.

The electro-mechanical secondary door linear actuator wiring harness was incorrectly installed and an unauthorized jumper wire placed between terminals one and two of TB 1.

A lack of tech data adherence and unauthorized maintenance acts created this mishap.

### SIGNAL DATA CONVERTER MODULE OVERHEAT

**D**uring SELM test a missile test command segment 1 was initiated resulting in a Fault. Following T.O. trouble-shooting procedures another Fault occurred. C617A drawer was replaced and a new SELM test set was installed and a successful missile test command 1 was accomplished. The original SELM test set was tested, revealing a connector pin shorted to ground causing A-24 modules to overheat and fail.

This defective SELM test set was removed from service. Teardown and analysis of A-24 modules by depot has been requested.

# PROFESSIONAL PERFORMERS

Individuals selected for these pages as SAC's top professional performers of the month are chosen from nominations made by all SAC units. Selection is made only after all nominations have been carefully screened and those chosen meet the highest standards of excellence outlined in SACR 127-2.



## MAINTENANCE AIRMAN

A1C David A. Thompson, 7th FMS, Carswell AFB, is SAC Maintenance Airman of the Month. As a jet engine mechanic, he excels in every aspect of his duty position. Recently, a B-52D engine was removed for in-shop maintenance. As a member of the Quick Engine Turnaround Crew, Airman Thompson worked through the night to accomplish the necessary repairs in time for the engine to be reinstalled allowing the aircraft to make its scheduled takeoff. During the recent ORI, he served as a key member of the maintenance launch team and helped to achieve the unparalleled record of 100% engine reliability for the aircraft launches. He was also selected for the GIANT THRUST TWO mission at Andersen AFB. He is a dedicated and valuable asset to the SAC maintenance organization and the United States Air Force.

## TITAN CREW

Members of Crew E-062, 381st SMW set a superior example by their recent outstanding performances. Their close monitoring of equipment status, supervision of maintenance operations, and coordination with maintenance job control have prevented several equipment malfunctions from developing into emergency situations and precluded potential equipment damage and degradation of mission capability. Additionally, they successfully resolved several emergency situations during recent alert tours. Crew E-062 is the senior crew at the most remote site in the wing, hence, one of the most difficult to maintain. The crew has done a superb job in insuring that the site is properly maintained and remains fully mission capable. The crewmembers consistently achieve excellent scores on monthly emergency war order and weapon system examinations. They persistently refuse to be stymied by obstacles and perform well under the most trying circumstances. They have proven to be an outstanding work team and are deserving of selection as Crew of the Month.



**TITAN Crew E-062:** MCCC Capt Donald F. Brown, DMCCC Capt John R. Bemis, BMAT Sgt Thomas A. Currin, MFT SrA Bethlynn J. Farides.

## SAFETY NCO

TSgt Willard T. Rose is named SAC Safety NCO of the Month for sustained outstanding performance as the unit Safety NCO, 91 Civil Engineering Squadron, Minot AFB. The exceptional motivation and deep personal interest of Sgt Rose enabled the 91st CES to realize a 62% decrease in mishap cost since his assignment. His accomplishment is all the more striking considering the many CES personnel engaged in high risk activities. The task of mishap prevention in a diverse mission atmosphere is compounded when many tasks are performed throughout the 8000 square mile Minuteman III complex, often during periods of severe winter weather. Sgt Rose's leadership and dedication reflect the highest standards of professionalism and merit his selection as SAC Safety NCO of the month.

## MINUTEMAN CREW

The 44th Strategic Missile Wing crew of 1Lt William F. Burwell and 2Lt Robert W. Brandon is named Missile Crew of the Month. While on alert, Crew R-031 was notified that a member of an alarm response team performing launch facility checks was injured when he fell from a ladder in the support building. Extent of injuries was unknown, however, neck and back injuries were suspected. Acting quickly and efficiently, the crew initiated their contingency checklist by making calls to Ellsworth command post, job control and the base hospital. They then made arrangements to have the injured airman transported to the hospital in Phillip, South Dakota, where the airman was treated for injuries to his neck and a slipped disk in his back. The sound judgment and professionalism displayed by Lt Burwell and Lt Brandon resulted in the injured airman receiving medical attention in a minimum amount of time. The proficiency, professionalism and dedication of the crew demonstrate their abilities and they well deserve the award of SAC Crew of the Month.



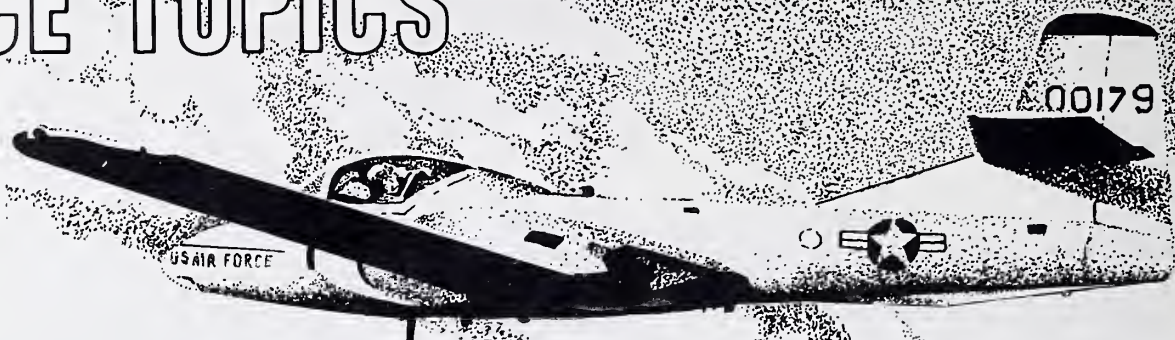
MINUTEMAN Crew R-031: MCCC 1Lt William F. Burwell, and DMCCC 2Lt Robert W. Brandon.

## FLYING CREW

On 5 September 1979, Crew R-12, 320 Bombardment Wing, Mather Air Force Base, took off number one in a MITO for a routine training mission. The copilot made the takeoff and everything was normal until flap retraction. During the flap retraction, both the electrical and manual stabilizer trim systems failed. The stabilizer trim remained at one unit nose down for the remainder of the flight. The pilot assumed control of the aircraft during the final 30 percent of flap travel and used a combination of airbrakes and power to obtain the correct pitch. The bomber was leveled off at a safe altitude where the problem was investigated. The crew was unable to regain use of the trim system. At the recommendation of Boeing, the crew burned down fuel in order to land at 290,000 pounds with a center of gravity of 28 percent.

During the final approach a combination of airbrakes two and three was used to keep the aircraft on speed and on glide slope. The pilot made the landing in airbrakes two. **Crewmembers include: Capt Richard E. Barr, pilot; Capt Kenneth G. Schramm, copilot; Capt Gary L. Franzen, radar navigator; Capt Richard R. Ray, navigator; Maj Dailey W. Bugg, EWO; and A1C Chester S. Robbins, AG.**

# ACE TOPICS



## THE GOOD, THE BAD, AND . . . THE UGLY

**T**he title of this article comes from the movie of the same name. You may remember it from a few years ago. The movie and the theme for this article came to mind as I reviewed some emergency and precautionary reports. In most cases, inflight problems are handled properly by aircrews — Good. Occasionally (more often than we would like), they aren't — Bad. Every once in a while a pilot fails to uncage his mental gyros and really steps on it — Ugly.

Here are a few examples.

**The Good** — After lowering the gear during a night sortie, the left main failed to indicate down and locked. The "press to test" showed the bulb to be good. The crew then elected to pull the "gear retract circuit breaker." This had no effect. Next, they recycled the cockpit lighting from dim to bright. This resulted in "three green" indication. The crew then activated the emergency gear blow-down system, landed and stopped straight ahead to have the gear pinned.

This crew demonstrated good systems knowledge and sound professional judgment. This type of situation is not uncommon; the odds are it will only be a microswitch. No sweat. Still, this crew took no chances. The first thing that impressed me about their approach to the problem is that they did not recycle the gear handle. Activating a malfunctioning system could aggravate things. Recycling the gear should be saved until you have determined it is really necessary and the risk is really worth it. Second, even after they got "three green" they still used the air bottle. You are going to write up the "bird" after you land, right? Well, to clear the write-up, maintenance will have to do a retraction check. This check includes the requirement to operate the emergency blow-down system. You don't save anybody anything by not using it, so why not give yourself a little extra insurance and . . . "turn, pull and hold?"

**The Bad** — Following a touch and go, the crew noted the light in the gear handle was still on. They recycled the gear twice in an attempt to get the light

to go out. Finally, they decided something was really wrong and called for a chase ship. The chase informed them that the left main gear was not fully retracted. They landed without difficulty. Maintenance found the left main gear forward trunnion pin improperly installed.

I just don't see the logic in messing with a malfunctioning gear system. Put it down . . . leave it down . . . and land. I don't have the space to go into detail here on trunnion pins, but this same malfunction caused a collapsed gear and \$4,400 in damage to a "Tweet" last year. Every time the gear was activated it came closer to failing completely.

**The Ugly** — On initial takeoff at 65 knots "an interruption of power was felt, similar to a compressor stall." The IP assumed control and aborted. He wasn't quite sure what happened because the engine instruments looked normal. The IP then decided to taxi back and try another takeoff. The engine runup looked good, so off he went. After getting airborne, vibrations were felt throughout the aircraft. He declared an emergency and landed. Maintenance found the right engine mounts faulty.

This one was hard for me to swallow. If the IP felt something bad enough to abort a takeoff, surely it was bad enough to head for the chocks and take a good hard look at the aircraft. Admittedly, he didn't have a lot to go on, but that's just the point. "When in doubt, check it out." Any number of things could have happened on the first takeoff which could have caused a disaster on the second. Even running up the engines after a suspected engine problem could have resulted in additional damage to the aircraft.

I want to emphasize as I did earlier that the good is by far the majority, but I don't want to minimize the bad and the ugly. In my opinion the ugly is the result of a nonprofessional approach to military flying. We should not tolerate it. I chock up most of the bad to complacency or overconfidence. We all fight this battle from time to time. The good is what we strive for. A professional knows himself and his aircraft.



# SAC SAFETY SCREEN

**97 BMW, Blytheville Crew R-14:** P Capt Douglas G. Webb, CP Capt Dan K. McCaskill, NN Capt Charles T. Davenport, BO SSgt Lewis C. Timbrook

**97 BMW, Blytheville Crew S-01:** P Capt Larry F. Smith, CP Capt James Fulton, RN Capt Dennis W. Mashburn, NN Capt Alison L. Piotter, EWO Capt John W. Carver, G TSgt Gale P. Alexander

**19 BMW, Robins Crew E-08:** IP Capt L. B. Lopez, CP Capt R. R. Miller, NB Capt J. R. Holt, NN Capt R. W. Tobin, NE 1Lt J. A. Holkestad, AG A1C D. L. Gilley

**19 BMW, Robins Crew E-116:** IP Capt N. N. Mears, CP 2Lt R. M. Evans, NN 1Lt J. T. Daily, BO Sgt G. D. Moon

**68 BMW, Seymour Johnson Crew S-02:** P Capt James Simms, CP Capt Robert W. Chedister, RN Capt James M. George, N 1Lt John J. Wallace, EW Capt Gary R. Seifert, AG SSgt Thurman C. Futch, Jr

**68 BMW, Seymour Johnson Crew E-105:** P Capt John W. McGeough, Jr, CP 1Lt Greg D. Collier, N Capt Arnold W. Howard, BO A1C Daniel C. Duncan

**379 BMW, Wurtsmith Crew E-11:** FP Maj Dennis D. Melton, CP 1Lt Kenneth R. Havatter, NB Capt Michael T. Jones, NN 1Lt Edward J. Higgins, Jr, NE 1Lt Michael R. Keefe, AG A1C Terry L. Hicks

**90 SMW, F E Warren Crew R-189:** MCCC 1Lt Jeffrey G. Gammell, DMCCC 2Lt Richard S. Plewes

**91 SMW, Minot Crew R-042:** MCCC 1Lt Anthony R. Johnson, DMCCC 2Lt Christopher W. Roy

**91 SMW, Minot Crew E-126:** MCCC Capt John A. Milauskas, DMCCC 1Lt Tommy L. Garrett

**308 SMW, Little Rock Crew R-130:** MCCC Capt C. Glen Berry, Jr, DMCCC Capt Shirley A. Hay, MSAT SrA Ricardo Berberena, MFT Amn James P. Welby

**351 SMW, Whiteman Crew E-156:** MCCC 1Lt Erick Leong, DMCCC 2Lt Duane L. Thompson

**390 SMW, Davis-Monthan Crew S-221:** MCCC Capt Donald R. Cox, DMCCC 1Lt Robert F. Eickhoff, MSAT Sgt Richard L. Veder, MFT SSgt Francis E. Simon

**42 BMW, Loring Crew E-124:** P Capt Neal T. Couch, CP 1Lt Carl J. Whatley, N 1Lt Walter Frant, BO A1C David A. Balderson

**42 BMW, Loring Crew R-173:** P Capt George S. Tucker, CP 1Lt Thomas D. Tainor, N Capt Louis Zanfardino, BO Sgt Charles H. Rathke

**410 BMW, K I Sawyer Crew S-111:** P Capt Richard C. Marr, CP Capt Barry J. Scheinost, N Capt Shelane W. Chow, BO Sgt Eugene P. Rogers

**42 BMW, Loring Crew E-08:** P Capt James C. Robertson, CP 1Lt Gregory M. Gearing, RN Capt Michael C. Santure, N Capt Franklin D. Sexton, EWO 1Lt Michael J. Slone, G SSgt John C. Marsden

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system IAW SACR 127-2.



# HALL OF FAME

## TACTICAL FLYING



### OVER TWENTY-THREE YEARS

170 AREFG, McGuire (NJANG) ..... None

### OVER TWENTY-ONE YEARS

171 AREFW, Greater Pittsburgh (PAANG) ..... Mar '58

157 AREFG, Pease (NHANG) ..... June '58

97 BMW, Blytheville ..... Aug '58

### OVER TWENTY YEARS

940 AREFG, Mather (USAFR) ..... May '59

307 AREFG, Travis ..... Sep '59

### OVER EIGHTEEN YEARS

151 AREFG, Salt Lake City (UTANG) ..... Feb '61

161 AREFG, Sky Harbor (AZANG) ..... Apr '61

126 AREFW, Chicago O'Hare (ILANG) ..... Apr '61

134 AREFG, McGhee Tyson (TNANG) ..... Aug '61

### OVER SEVENTEEN YEARS

340 AREFG, Altus ..... Feb '62

96 BMW, Dyess ..... Aug '62

### OVER SIXTEEN YEARS

19 BMW, Robins ..... Aug '63

### OVER FOURTEEN YEARS

160 AREFG, Rickenbacker (OHANG) ..... Dec '64

320 BMW, Mather ..... Jul '65

### OVER THIRTEEN YEARS

452 AREFW, March (USAFR) ..... Sep '66

### OVER TWELVE YEARS

92 BMW, Fairchild ..... Feb '67

55 SRW Offutt ..... Jul '67

2 BMW, Barksdale ..... Aug '67

### OVER TEN YEARS

5 BMW, Minot ..... Feb '69

42 BMW, Loring ..... Sep '69

141 AREFW, Fairchild (WAANG) ..... Oct '69

### OVER NINE YEARS

28 BMW, Ellsworth ..... May '70

### OVER SEVEN YEARS

7 BMW, Carswell ..... Mar '72

101 AREFW, Bangor (MEANG) ..... Mar '72

416 BMW, Griffiss ..... May '72

305 AREFW, Grissom ..... Aug '72

### OVER FIVE YEARS

931 AREFG, Grissom ..... Feb '74

384 AREFW, McConnell ..... Mar '74

189 AREFG, Little Rock (ARANG) ..... May '74

### OVER FOUR YEARS

43 SW, Andersen ..... Dec '74

68 BMW, Seymour Johnson ..... Sep '75

## ICBM

### OVER FIFTEEN YEARS

90 SMW, F E Warren ..... Jul '64

1 STRAD, Vandenberg ..... Sep '64

### OVER FOURTEEN YEARS

308 SMW, Little Rock ..... Aug '65

### OVER NINE YEARS

341 SMW, Malmstrom ..... Apr '70

### OVER SIX YEARS

390 SMW, Davis-Monthan ..... Jul '73

### OVER FIVE YEARS

351 SMW, Whiteman ..... Oct '74

### OVER FOUR YEARS

91 SMW, Minot ..... Nov '74

To gain listing in the Hall of Fame, a SAC or ARF unit must be Class A mishap-free for 48 months.